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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/863,052 | 05/22/2001 | Dan F. Ammar | 24418 | 7389 |

7590 11/23/2004
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EXAMINER

NGUYEN, SIMON

ART UNIT PAPER NUMBER

2685

DATE MAILED: 11/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

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| | | | |
|------------------------------|--------------------------------------|--------------------------------------|--|
| Office Action Summary | Application No. 09/863,052 | Applicant(s) AMMAR, DAN F. | |
| | Examiner SIMON D NGUYEN | Art Unit 2685 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 August 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 2 and 4-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 2 and 4-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-2, 4-6, 8-10, 12-17, 19-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Winslow (6,194,968) in view of Kawase (5,828,953).

Regarding claim 1, Winslow discloses a transceiver module (fig.2) comprising: a microwave monolithic integrated circuit (MMIC) having at least one amplifier (fig.2, column 4 lines 54-55); and a controller (170) operatively connected to said MMIC for sensing amplifier operating conditions and tuning (adjusting) the at least one amplifier to an optimum operating condition (column 4 lines 40-67, column 5 lines 33-40). However, Winslow does not specifically disclose the controller including a memory for storing values of preset MMIC characteristics at various stages and tuning the amplifier based on the stored values.

Kawase, in the same field of invention, discloses a communication device having a controller with a memory, wherein the memory stores control data for maintaining a desired operation of the amplifier in which the driving range of the amplifier is controlled in accordance with the stored control data at various stages (abstract, figs.

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1, 2, 7-10, column 2 lines 16-52, column 4 lines 38 to column 5 line 65). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to have Winslow, modified by Kawase in order to prevent the amplifier broken down due to the energy loss at a high level transmission output.

Regarding claim 12, this claim is rejected for the same reason as set forth in claim 1, wherein Winslow further discloses a microwave monolithic integrated circuit (MMIC) having a plurality of amplifiers, each has a source, a drain, and a gate (fig.2, column 4 lines 1-21, 54-55); and a controller (170) operatively connected to said MMIC for sensing amplifier operating conditions and tuning (adjusting) the at least one amplifier to an optimum operating condition (column 4 lines 40-67, column 5 lines 33-40).

Regarding claims 2, 14, the modified Winslow system, Winslow discloses a control unit comprising a microcontroller (30) connected to the MMIC (figs.1-2). However, the modified Winslow system does not specifically disclose the microcontroller is a surface mounted microcontroller. The examiner takes an official notice that even though Winslow does not specifically disclose the microcontroller chip mounted on the surface, however, the microcontroller chip mounted on a surface of a circuit board is known to those skilled in the art in order to easily replace as well as to save cost of the replacement in case of defection or damage to the microcontroller without replacing a whole circuit board.

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Regarding claims 4, 8, 10, 13, 15, 19, and 21, Winslow does not specifically disclose an EEPROM memory, a power sensor, and a multi-channel analog-to-digital converter.

Kawase discloses a method and apparatus for controlling radio frequency amplifier (abstract, fig.1) comprising an memory (12) having stored values of operating conditions for the amplifier such that the controller (14) controls (tunes) the amplifier (1) based on the stored values (fig.1, column 8 lines 1-67), a power sensor (10) operatively connected to said at least one amplifier (2, 3), wherein said controller is responsive to said power sensor for tuning said at least one amplifier and a controller (14) responsive to the power sensor for adjusting the amplifier (column 4 line 38 to column 54, column 8 lines 1-67), and an analog-to-digital converter (13). It should be noted that both Winslow and Kawase does not specifically disclose the memory is an EEPROM, however, for storing data in a memory, an EEPROM is a best choice, Therefore, it would have been obvious to one skilled in the art at the time the invention was made to have Winslow, modified by Kawase to adjust a transmitting signal according to its preset value in order to allow the amplifier to operate in any one of multiple signal modulation systems and an EEPROM is used in order to prevent lost data when the power supply is turned off.

Regarding claims 5 and 16, in the modified Winslow, Kawase discloses the stored data comprise optimum drain current and expected amplifier output (column 5 lines 4-54, column 7 lines 8-18, column 8 lines 58-67).

Regarding claims 6, 17, in the modified Winslow, Winslow further discloses wherein said controller further comprises a sensor for sensing changes in operating

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amplifier conditions by the at least one amplifier, wherein said controller adjusts the at least one amplifier based on sensed changes in amplifier operating conditions (column 4 line 56 to column 5 line 39).

Regarding claims 9, 20, in the modified Winslow, Winslow further discloses a temperature sensor (150) for measuring the temperature of said MMIC, wherein said controller is responsive to sensed temperature for determining whether any change in amplifier operating conditions is a result of a changed temperature or a malfunction (column 4 line 40 to column 5 line 39).

3. Claims 7, 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Winslow (6,194,968) in view of Kawase (5,828,953) and further in view of Sturzebecher et al. (5,162,657).

Regarding claims 7 and 18, in the modified Winslow, Winslow does not disclose a potentiometer.

Sturzebecher discloses a MMIC having a potentiometer for measuring voltage at an amplifier (column 1 line 43, column 4 lines 6, 9). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to have the modified Winslow system, modified by Sturzebecher to measure voltage at each amplifier in order to control a transmission signal at a desired power.

4. Claims 11, 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Winslow (6,194,968) in view of Kawase (5,828,953) and in view of Hulkko (5,551,067).

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Regarding claims 11 and 22, in the modified Winslow, Winslow discloses the control unit (controller) operated for correcting a gain variation over temperature, the linearization (performance drift, fluctuations) of the power monitor circuit as a function of temperature and frequency, gain equalization (compensation) (column 4 line 22 to column 5 line 40). However, the modified Winslow does not specifically disclose power attenuation linearization as a function of frequency and temperature.

Hulkko discloses the same type of invention, in which the power attenuation linearization as a function of frequency and temperature (fig.2, column 4 line 57-60). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to have the modified Winslow, modified by Hulkko to adjust a transmitting signal according to its preset value in order to improve the system performance.

Response to Arguments

5. Applicant's arguments with respect to claims 1-2, 4-22 have been considered but are moot in view of the new ground(s) of rejection.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Simon Nguyen whose telephone number is (703) 308-1116. The examiner can normally be reached on Monday-Friday from 7:00 AM to 4:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward F. Urban, can be reached on (703) 305-4385.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 306-0377.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

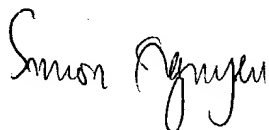
Or faxed to:

(703) 872-9314, (for formal communications intended for entry)

Hand-delivered response should be brought to Crystal Park II,
2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Simon Nguyen

October 8, 2004

A handwritten signature in black ink that reads "Simon Nguyen". The signature is written in a cursive, flowing style.